Atty. Docket No. YOR920030043US1
(590.105)

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. **(Currently Amended)** A[[n]] signal processing apparatus for producing an output signal in performing pattern recognition, said apparatus comprising:

an input signal arrangement which inputs patterned features;

a base model ~~provision~~ arrangement which provides at least one base model;

an environment detector which ascertains an environment from which the at least one base model originated; and

a transform arrangement which is applied to the input signal to produce[[s]] a target model output signal based on a feature vector corresponding to the environment from which the at least one base model originated.

2. **(Currently Amended)** The apparatus according to Claim 1, wherein said apparatus is adapted to perform speech recognition and said input arrangement is adapted to input ~~linguistic~~ speech features.

3. **(Currently Amended)** The apparatus according to Claim 1, wherein said base model ~~provision~~ arrangement is adapted to build a pool of base models.

4. **(Original)** The apparatus according to Claim 3, wherein said base models are Gaussian Mixture Models.

5. **(Original)** The apparatus according to Claim 3, wherein said environment detector is adapted to express the closeness of a set of at least one input feature to a given base model.

6. **(Original)** The apparatus according to Claim 1, wherein said feature vector represents at least one likelihood associated with at least one input feature in a given environment.

7. **(Original)** The apparatus according to Claim 1, wherein said environment detector is adapted to inform the production of said feature vector in correspondence with the environment from which the at least one base model originated.

8. **(Currently Amended)** A computer implemented method of performing pattern recognition, said method comprising the steps of:

inputting features;

providing at least one base model;

ascertaining an environment from which the at least one base model originated; and

producing a target model based on a feature vector corresponding to the environment from which the at least one base model originated.

9. **(Currently Amended)** The method according to Claim 8, wherein said method is adapted to perform speech recognition and said inputting step comprises inputting ~~linguistic~~ speech features.

10. **(Original)** The method according to Claim 8, wherein said providing step comprises building a pool of base models.

11. **(Original)** The method according to Claim 10, wherein said base models are Gaussian Mixture Models.

12. **(Original)** The method according to Claim 10, wherein said ascertaining step comprises expressing the closeness of a set of at least one input feature to a given base model.

13. **(Original)** The method according to Claim 8, wherein said feature vector represents at least one likelihood associated with at least one input feature in a given environment.

14. **(Original)** The method according to Claim [[1]] 13, wherein said ascertaining step comprises informing the production of said feature vector in correspondence with the environment from which the at least one base model originated.

15. **(Currently Amended)** A computer program storage device readable by a computerized machine, tangibly embodying a program of coded computer instructions executable by the machine to perform method steps upon computerized data for performing pattern recognition, said method comprising the steps of:

inputting data corresponding to patterned features;

providing at least one base model;

ascertaining an environment from which the at least one base model originated; and

producing [[a]] target model output data based on a feature vector applied to the input data in a manner corresponding to the environment from which the at least one base model originated.

16. **(New)** The apparatus according to Claim 1, wherein cascading of two model levels is utilized for channel mismatch compensation.

17. **(New)** The method according to Claim 8, wherein cascading of two model levels is utilized for channel mismatch compensation.